

BIOHACK NOTES



# DIGESTION AND ABSORPTION

- BASED ON ACTIVE RECALL AND SPACED REPETITION
- TARGET 360/360 IN NEET BIOLOGY & 100/100 IN BOARDS!



**PARTH** GOYAL





## • DIGESTIVE SYSTEM

1. The tooth is embedded in a socket of jaw bone. This type of arrangement is called \_\_\_\_\_ (NEET)

2. Diphyodont mean ? (NEET)

3. Humans are homodont/heterodont. (NEET)

4. Dental formula of adult human -

5. Dental formula of child -

6. The hard chewing surface of teeth is made up of \_\_\_\_\_

7. Tongue is attached to floor by \_\_\_\_\_

8. The upper surface of tongue have small projections called \_\_\_\_\_

9. Common passage for food and air is -

10. The oesophagus and trachea opens into -

11. \_\_\_\_\_ prevent entry of food into \_\_\_\_\_

12. The oesophagus leads to a \_\_\_\_ shaped structure.

13. \_\_\_\_\_ sphincter is present between the oesophagus and stomach.

14. 4 parts of stomach are -

15. Duodenum is \_\_\_\_ shaped.

16. Ileum is highly coiled. T/F

17. Pyloric sphincter is present between -

18. Large intestine consists of (3)

19. \_\_\_\_\_ is a blind sac and hosts some symbiotic microorganisms.

20. \_\_\_\_\_ arise from caecum.

21. Colon parts are - (4)

22. Wall of alimentary canal have layers - (4)

23. \_\_\_\_\_ is the outermost layer.

24. Serosa is made up of thin/thick \_\_\_\_\_

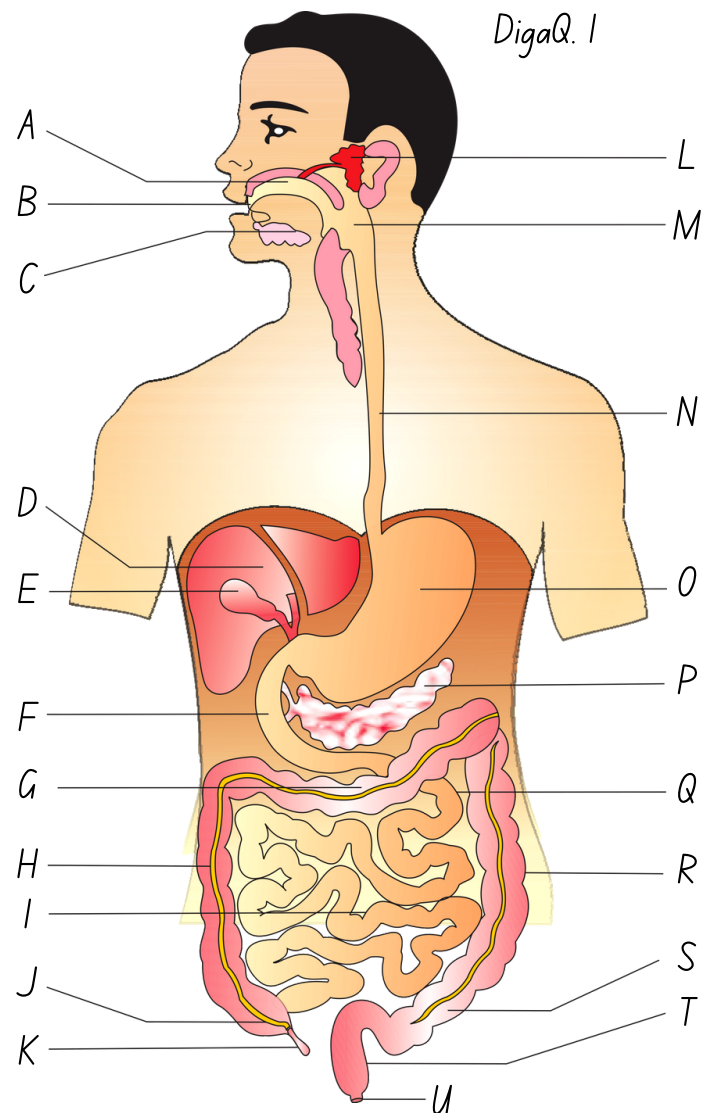
25. The submucosal layer is formed of -

26. Mucosa forms \_\_\_\_\_ in the stomach and \_\_\_\_\_ in the small intestine.

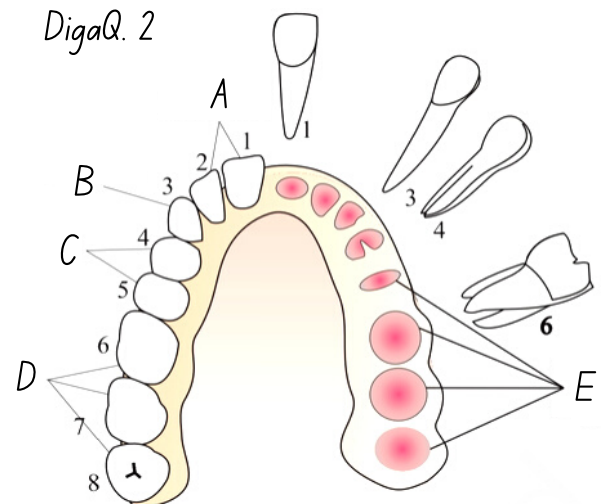
27. Villi is supplied by a large lymph vessel called \_\_\_\_\_

28. Crypts of Lieberkuhn are modification of -

29. Gastric glands are modification of -



DigaQ. 2

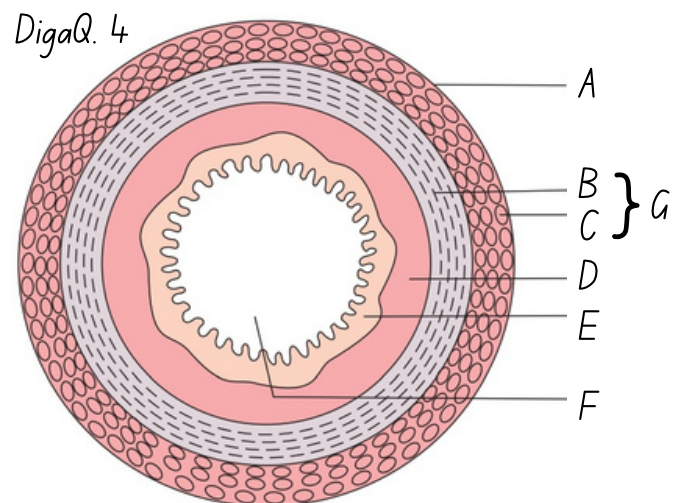
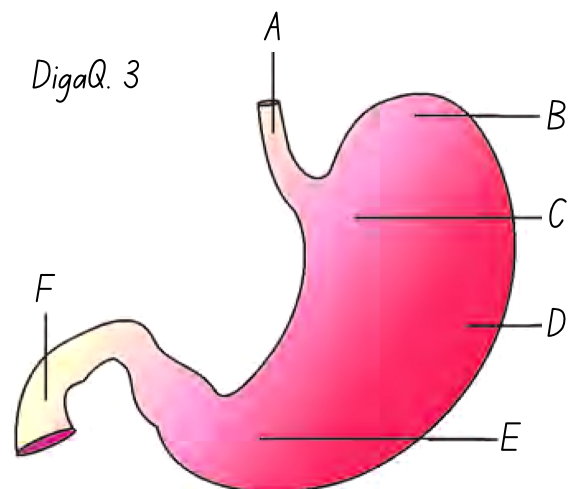


30. The 3 digestive glands are -
31. The 3 salivary glands are -
32. These salivary glands are present just inside the buccal cavity. T/F
33. Liver weight \_\_\_\_\_
34. Largest gland of human body is -
35. Liver have \_\_\_\_ (no.) of lobes.
36. The structural and functional unit of liver is -
37. Each lobule is covered by a thick/thin connective tissue sheath called \_\_\_\_\_
38. \_\_\_\_\_ and \_\_\_\_\_ form the common bile duct.
39. Hepato-pancreatic duct is guarded by \_\_\_\_\_ (NEET)



## • DIGESTION OF FOOD

40. The 2 major functions of buccal cavity is -
41. Mucus is present in saliva. T/F
42. Swallowing is also called \_\_\_\_\_
43. The saliva in the oral cavity contains electrolytes (4) - (NEET)
44. Enzymes in saliva are (2) - (NEET)
45. About \_\_\_\_% of starch is hydrolysed by salivary amylase.
46. Optimum pH for salivary amylase is \_\_\_\_\_
47. Starch is hydrolysed into \_\_\_\_\_ in mouth.
48. Lysozyme fxn (I) -
49. Chief cells are also called -
50. Parietal cells are also called -
51. \_\_\_\_\_ is also known as an extrinsic factor.
52. The 3 types of glands in stomach are - (NEET)
53. Fxn of all 3 of them is - (NEET)
54. \_\_\_\_\_ help in absorption of extrinsic factor.
55. Vitamin B12 is absorbed in the stomach. T/F
56. Stomach stores food for \_\_\_\_-\_\_\_\_ hours.
57. What is chyme ?
58. Pepsin converts protein into \_\_\_\_\_ and \_\_\_\_\_
59. \_\_\_\_\_ and \_\_\_\_\_ play an important role in lubrication and protection from HCl.
60. HCl provides an acidic pH of \_\_\_\_\_, optimal for pepsins.
61. Rennin/Renin is a proteolytic enzyme in gastric juice of infants. (NEET)



62. Small amount of lipases/proteases are also secreted by gastric glands.

63. The pancreatic juice contain enzymes - (6) (NEET)

64. Trypsinogen is activated by \_\_\_\_\_ which is secreted by \_\_\_\_\_ (NEET)

65. Bile contains (4) -

66. Bile contains enzymes. T/F

67. Bile activates \_\_\_\_\_

68. Goblet cells are absent in the intestine. T/F

69. Bicarbonates are released from the pancreas. T/F

70. pH \_\_\_\_\_ is needed for enzyme activation in duodenum.

71. Sub-mucosal gland example is (1) - (NEET)

72. Trypsin breaks proteins into amino acids. T/F

73. Pancreatic amylase breaks starch to glucose. T/F (NEET)

74. Pancreatic lipase breaks fat into monoglyceride. T/F

75. Pancreatic nucleases break \_\_\_\_\_ to \_\_\_\_\_

76. Sucrose is made up of \_\_\_\_\_ + \_\_\_\_\_

77. Lactase is made up of \_\_\_\_\_ + \_\_\_\_\_

78. Succus entericus doesn't constitute mucus. T/F

79. The breakdown of biomacromolecules occur in \_\_\_\_\_ region.

80. The simple substances thus formed are absorbed in \_\_\_\_\_ and \_\_\_\_\_ regions of the small intestine.

81. Fxns of large intestine (2) -

82. The undigested food enter into caecum through \_\_\_\_\_

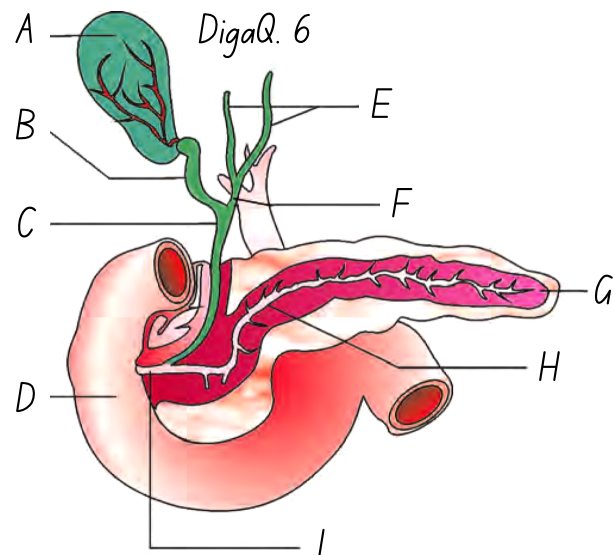
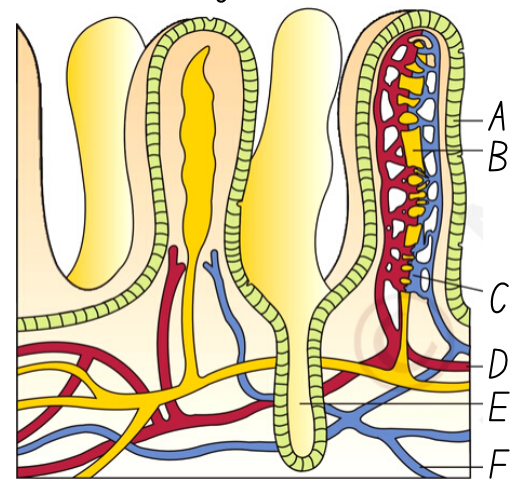
83. The gastro-intestinal tract is not under neural and hormonal control. T/F

84. \_\_\_\_\_ prevent the backflow of faecal matter.

85. Gross calorific value of carbs, protein and fats is -

86. Physiological value of carbs, protein and fat is -

DigaQ. 5



## • ABSORPTION OF DIGESTED FOOD

87. Compounds absorbed by simple diffusion are (3) -

88. Compounds absorbed by facilitated transport are (2) -

89. Compounds absorbed by active transport are (3) -

90. Fatty acid and glycerol are first incorporated into \_\_\_\_\_

91. Chylomicrons are \_\_\_\_\_ coated fat globules.

92. Maximum absorption of substance takes place in \_\_\_\_\_



**PARTH GOYAL**



93. \_\_\_\_\_ is a drug which is absorbed from the mouth.

94. Absorption of alcohol take place in -

95. Drugs are not absorbed in the large intestine. T/F

96. Medicines are not absorbed in stomach. T/F

97. What is assimilation?

98. Mass peristaltic movement occurs in \_\_\_\_\_



## • DISORDERS OF DIGESTIVE SYSTEM

99. Parasites of intestine are (5) -

100. The scientific names of all the parasites of Q.99 is -

101. Skin turn yellow in \_\_\_\_\_

102. Vomit centre is present in -

103. A feeling of \_\_\_\_\_ precedes vomiting.

104. Abnormal frequency of bowel movement is seen in (2) -

105. Absorption of food reduces in diarrhoea. T/F

106. Causes of Indigestion are (4) -

107. Dietary deficiencies of proteins and total food calories are widespread in - (5)

108. What deficiencies occur in marasmus?

109. Marasmus is found in infants of which age?

110. It occurs because?

111. Marasmus often happens because of which reason?

112. Features of marasmus (5) -

113. Body weight declines considerably in Marasmus. T/F

114. Growth and development of brain and mental faculties is not retarded in marasmus. T/F

115. Kwashiorkor is produced by \_\_\_\_\_ deficiency.

116. It occurs in children of \_\_\_\_\_ age.

117. It occurs because?

118. Features of kwashiorkor (5) -

119. Difference between Kwashiorkor and Marasmus is -



# **DIGESTION AND ABSORPTION**



**PARTH GOYAL**



# **ANSWERS**

## • DIGESTIVE SYSTEM

1. Thecodont
2. Presence of two sets of teeth during life
3. Heterodont
4. 2123/2123
5. 2102/2102
6. Enamel
7. Frenulum
8. Papillae
9. Pharynx
10. Pharynx
11. Epiglottis, glottis
12. J
13. Gastro-oesophageal
14. Fundus, cardiac, body, pyloric
15. C
16. T
17. Stomach and duodenum
18. Caecum, colon, rectum
19. Caecum
20. Vermiform appendix
21. an ascending, a transverse, descending part and a sigmoid colon
22. Serosa, muscularis, sub-mucosa and mucosa
23. Serosa
24. Thin mesothelium
25. Loose connective tissues containing nerves, blood and lymph vessels
26. Rugae, villi
27. Lacteal
28. Mucosa
29. Mucosa
30. Salivary, liver and pancreas
31. parotids (cheek), the submaxillary/sub-mandibular (lower jaw) and the sub-lingual (below the tongue)
32. False, just outer

33. 1.2-1.5 kg

34. Liver

35. 2

36. Hepatic lobule

37. Thin, Glisson's capsule

38. Duct of gallbladder and hepatic duct

39. Sphincter of oddi

## • DIGESTION OF FOOD

40. Mastication of food, facilitation of swallowing

41. T

42. Deglutition

43.  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Cl}^-$ ,  $\text{HCO}_3^-$

44. Salivary amylase, lysozyme

45. 30

46. 6.8

47. Maltose

48. Antibacterial agent

49. Peptic cells

50. Oxyntic cells

51. Vitamin  $\text{B}_{12}$

52. Mucus neck cell, peptic or chief cells, parietal or oxyntic cells

53. Mucus cell - Secrete mucus, Peptic cell - secrete pepsinogen, Parietal cell - secrete  $\text{HCl}$  and intrinsic factor

54. Intrinsic factor

55. F, in ileum

56. 4-5

57. Food with acidic juice of stomach together forms chyme

58. Proteoses and peptones

59. Mucus and bicarbonates

60. 1.8



**PARTH GOYAL**

61. Rennin (Trick - Digestion mai Di(2) aata hai, so 2 n digestion vale rennin mai aayenge)
62. Lipases
63. Trypsinogen, chymotrypsinogen, procarboxypeptidase, amylases, lipases and nucleases.
64. Enterokinase, intestinal mucosa
65. Bile salts, bile pigments (Bilirubin and biliverdin), cholesterol and phospholipid
66. False
67. Lipase
68. False
69. True
70. 7.8
71. Brunner's gland
72. F
73. F
74. T
75. Nucleic acids to nucleotides
76. Glucose and fructose
77. Glucose and galactose
78. F, it consist of both mucus and enzymes
79. Duodenum
80. Jejunum and ileum
81. 1) Absorption of water, minerals and drugs,  
2) secretion of mucus which helps in adhering the waste for easy passage
82. Ileo-caecal valve
83. F
84. Ileo-caecal valve
85. Carbohydrates - 4.1 kcal/g, Proteins - 5.65 kcal/g, Fats - 9.45 kcal/g
86. Carbohydrates - 4.0 kcal/g, Proteins - 4.0 kcal/g, Fats - 9.0 kcal/g

### • ABSORPTION OF FOOD

87. glucose, amino acids and some electrolytes like chloride ions

88. glucose and amino acids
89. amino acids, monosaccharides like glucose, electrolytes like Na
90. Chylomicrons
91. Protein
92. Small intestine
93. Nitroglycerin
94. Stomach
95. F
96. F, (see summary of NCERT)
97. The utilization of absorbed substance by the tissue.
98. Large intestine

### • DISORDERS

99. tapeworm, roundworm, threadworm, hookworm, pin worm
100. Taenia solium, Ascaris, Enterobius, Ancylostoma, Enterobius (pinworm and threadworm are same)
101. Jaundice
102. Medulla
103. Nausea
104. Diarrhoea, Constipation
105. T
106. inadequate enzyme secretion, anxiety, food poisoning, over eating, and spicy food
107. South Asia, South-East Asia, South America, West Africa, Central Africa
108. Protein and calorie
109. <1
110. Mother's milk is replaced too early by other foods which are poor in both proteins and caloric value
111. Mother has second pregnancy or childbirth



**PARTH GOYAL**



112. 1) impaired growth 2) replacement of tissue proteins 3) extreme emaciation of the body 4) thinning of limbs 5) skin becomes dry, thin and wrinkled

113. T

114. F

115. Protein

116. >1

117. Replacement of mother's milk by a high calorie low protein diet

118. wasting of muscles, thinning of limbs, failure of growth and brain development, extensive oedema and swelling

119. unlike marasmus, some fat is still left under the skin in kwashiorkor

### • DigaQs

DigaQ. 1 - The human digestive system

- |  |                        |
|--|------------------------|
| A - Oral cavity                        | K - Vermiform appendix |
| B - Mouth                              | L - Parotid gland      |
| C - Submaxillary and sublingual glands | M - Pharynx            |
| D - Liver                              | N - Oesophagus         |
| E - Gall bladder                       | O - Stomach            |
| F - Duodenum                           | P - Pancreas           |
| G - Transverse colon                   | Q - Jejunum            |
| H - Ascending colon                    | R - Descending colon   |
| I - Ileum                              | S - Sigmoid colon      |
| J - Caecum                             | T - Rectum             |
|  | U - Anus               |

DigaQ. 2 - Different types of teeth in the jaws

- A - Incisor
- B - Canine
- C - Premolar
- D - Molars
- E - Socket of jaw

DigaQ. 3 - Anatomical regions of human stomach

- A - Oesophagus
- B - Fundus
- C - Cardiac
- D - Body
- E - Pyloric
- F - Superior portion of duodenum

DigaQ. 4 - transverse section of gut

- A - Serosa
- B - Inner circular
- C - Outer longitudinal
- D - Submucosa
- E - Mucosa
- F - Lumen
- G - Muscularis

DigaQ. 5 - A section of small intestinal mucosa

- A - Villi
- B - Lacteal
- C - Capillaries
- D - Artery
- E - Crypts of Lieberkuhn
- F - Vein

DigaQ. 6 - The duct systems of liver, gall bladder and pancreas

- A - Gall bladder
- B - Duct from bladder
- C - common bile duct
- D - Duodenum
- E - Ducts from liver
- F - Common hepatic duct
- G - Pancreas
- H - Pancreatic duct
- I - Hepato-pancreatic duct



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SCAN AND DONATE US SO THAT WE  
CAN CREATE MORE SUCH QUALITY  
CONTENT FOR YOU!

JUST ₹10-20 WILL BE APPRECIABLE! :)

**\*When someone unmute their  
audio during online class\***

*Teacher:*

